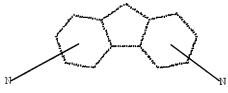
***** QUERY RESULTS *****

=> d his l16

(FILE 'REGISTRY' ENTERED AT 15:28:12 ON 24 JUN 2009)
SAVE TEMP L15 FAN333REGL4/A

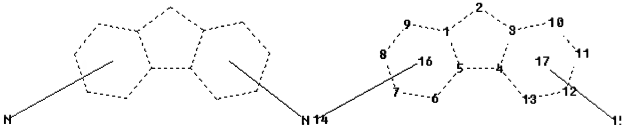
FILE 'HCAPLUS' ENTERED AT 15:30:39 ON 24 JUN 2009
L16 1 S L15

=> d que l16
L3 STR



Structure attributes must be viewed using STN Express query preparation:

Uploading L1.str



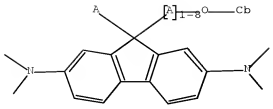
chain nodes :
14 15
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13
ring bonds :
1-2 1-9 1-5 2-3 3-10 3-4 4-13 4-5 5-6 6-7 7-8 8-9 10-11 11-12 12-13

exact/norm bonds :
1-2 1-9 1-5 2-3 3-10 3-4 4-13 4-5 5-6 6-7 7-8 8-9 10-11 11-12 12-13

isolated ring systems :
containing 1 :

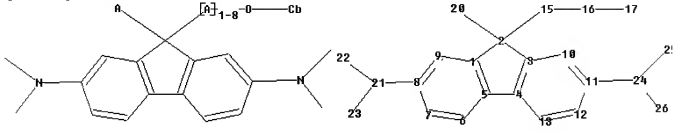
Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:CLASS 15:CLASS 16:Atom 17:Atom

L5 10136 SEA FILE=REGISTRY SSS FUL L3
L13 STR



Structure attributes must be viewed using STN Express query preparation:

Uploading L4.str



chain nodes :
17 20
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13
ring/chain nodes :
15 16 21 22 23 24 25 26
chain bonds :
2-20 8-21 11-24 16-17
ring/chain bonds :
2-15 15-16 21-22 21-23 24-25 24-26
ring bonds :
1-2 1-9 1-5 2-3 3-10 3-4 4-13 4-5 5-6 6-7 7-8 8-9 10-11 11-12 12-13

exact/norm bonds :
2-15 2-20 8-21 11-24 15-16 21-22 21-23 24-25 24-26
exact bonds :
1-2 2-3 4-5 16-17
normalized bonds :
1-9 1-5 3-10 3-4 4-13 5-6 6-7 7-8 8-9 10-11 11-12 12-13
isolated ring systems :
containing 1 :

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 15:CLASS 16:CLASS 17:Atom 20:CLASS 21:CLASS
22:CLASS 23:CLASS 24:CLASS
25:CLASS 26:CLASS

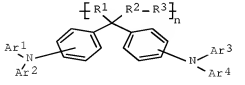
L15 1 SEA FILE=REGISTRY SUB=L5 SSS FUL L13
L16 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L15

=> d l16 ibib abs hitstr hitind

L16 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:409587 HCAPLUS Full-text
DOCUMENT NUMBER: 142:448093
TITLE: Charge-transporting compounds for varnishes, thin films, and organic electroluminescent devices with good long life, high luminance, and low voltage workability.
INVENTOR(S): Yamada, Tomohisa; Yoshimoto, Takuji; Ono, Go
PATENT ASSIGNEE(S): Nissan Chemical Industries, Ltd., Japan
SOURCE: PCT Int. Appl., 35 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005042621	A1	20050512	WO 2004-JP16094	20041029
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1679336	A1	20060712	EP 2004-793202	20041029
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
CN 1875054	A	20061206	CN 2004-80032242	20041029
KR 2006118449	A	20061123	KR 2006-707846	20060424
US 20070031699	A1	20070208	US 2006-577333	20060428
PRIORITY APPLN. INFO.:			JP 2003-369864 A	20031030
			WO 2004-JP16094 W	20041029

OTHER SOURCE(S): MARPAT 142:448093
GI



I

AB Disclosed is a charge-transporting compds. I composed of a polymer having a polymer main chain wherein fluorene derivs. are connected at the 9-position

which fluorine derivs. are resp. substituted by an amino group having an aromatic ring or a heterocyclic ring (Ar1, Ar2, Ar3, Ar4 = (un)substituted aromatic or heterocyclic ring; R1, R2 = (substituted)divalent organic group; R3 = (substituted) organic group having terminal oxygen or nitrogen; n = number). Thus, 14.5 mmol 2,7-dibromofluorene and 29 mmol diphenylamine were reacted at 100° for 24 h, 2 mmol of the resulting 2,7-bis(diphenylamino)fluorene was reacted with 4 mmol α-chloro-4-methoxytoluene at 100° for 24 h, the resulting compound was reacted with boron tribromide to give 2,7-bis(diphenylamino)-9,9-bis(4-hydroxybenzyl)-fluorene, 1.4 mmol of which was polymerized with 1.4 mmol 4-fluorophenylsulfone at 130° for 24 h to give a copolymer with number average mol. weight 23,000, which was coated onto an ITO-glass, a luminescent layer, electron injecting layer, and cathode were formed thereon to give an organic electroluminescent device with luminance starting voltage 6.5 V, and voltage 11 V under 100 cd/m2 and 12 under 500 cd/m2.

IT 851379-81-2P
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of charge-transporting compds. for varnishes, thin films, and organic electroluminescent devices with good long life, high luminance, and low voltage workability.)

RN 851379-81-2 HCAPLUS

CN Poly[oxy-1,4-phenylenesulfonyl-1,4-phenyleneoxy-1,4-phenylenemethylene[2,7-bis(diphenylamino)-9H-fluoren-9-ylidene]methylene-1,4-phenylene] (9CI) (CA INDEX NAME)

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

IC ICM C08G085-00
ICS C08G061-00; C08G075-20; H05B033-22; H05B033-14

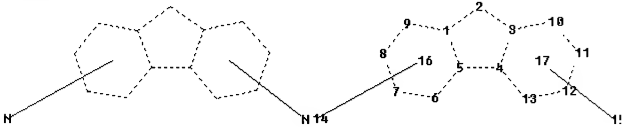
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 73

IT 851379-81-2P
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of charge-transporting compds. for varnishes, thin films, and organic electroluminescent devices with good long life, high luminance, and low voltage workability.)

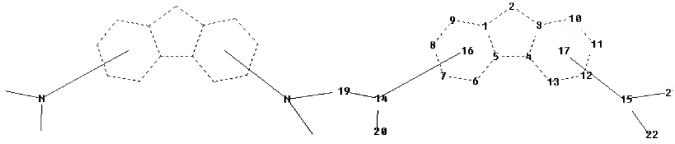
REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

******* SEARCH HISTORY *******

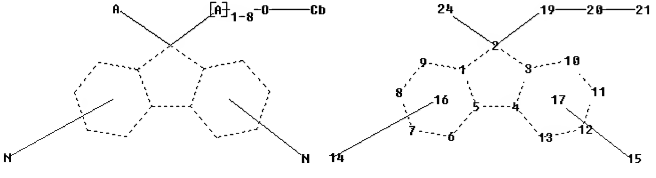
```
=> d his nofi

     (FILE 'HOME' ENTERED AT 14:36:41 ON 24 JUN 2009)

     FILE 'HCAPLUS' ENTERED AT 14:36:48 ON 24 JUN 2009
L1             1 SEA ABB=ON  PLU=ON  US20070031699/PN
                 D IALL
                 SEL RN

     FILE 'REGISTRY' ENTERED AT 14:38:21 ON 24 JUN 2009
L2             8 SEA ABB=ON  PLU=ON  (122-39-4/BI OR 155926-52-6/BI OR 16433-88-
                 8/BI OR 824-94-2/BI OR 851379-78-7/BI OR 851379-79-8/BI OR
                 851379-80-1/BI OR 851379-81-2/BI)
                 D SCAN
L3               STRUCTURE UPLOADED
                 D

Uploading L1.str
```




```
chain nodes :
14  15
ring nodes :
1  2  3  4  5  6  7  8  9  10  11  12  13
ring bonds :
1-2  1-9  1-5  2-3  3-10  3-4  4-13  4-5  5-6  6-7  7-8  8-9  10-11  11-12  12-13

exact/norm bonds :
1-2  1-9  1-5  2-3  3-10  3-4  4-13  4-5  5-6  6-7  7-8  8-9  10-11  11-12  12-13

isolated ring systems :
containing 1 :


Match level :
1:Atom  2:Atom  3:Atom  4:Atom  5:Atom  6:Atom  7:Atom  8:Atom  9:Atom  10:Atom
11:Atom  12:Atom  13:Atom  14:CLASS  15:CLASS  16:Atom  17:Atom




L4            50 SEA SSS SAM L3
L5         10136 SEA SSS FUL L3
L6             5 SEA ABB=ON  PLU=ON  L2 AND L5
                 SAVE TEMP L5 FAN333REGL1/A
L7               STRUCTURE UPLOADED
                 D

Uploading L2.str
```

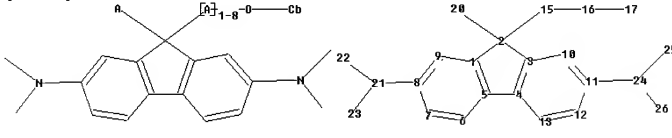


```
ring nodes :
1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  19  20  21  22
ring bonds :
1-2  1-9  1-5  2-3  3-10  3-4  4-13  4-5  5-6  6-7  7-8  8-9  10-11  11-12  12-13
14-19  14-20  15-21  15-22
exact/norm bonds :
1-2  1-9  1-5  2-3  3-10  3-4  4-13  4-5  5-6  6-7  7-8  8-9  10-11  11-12  12-13
14-19  14-20  15-21  15-22
isolated ring systems :
containing 1 :


Match level :
1:Atom  2:Atom  3:Atom  4:Atom  5:Atom  6:Atom  7:Atom  8:Atom  9:Atom  10:Atom
11:Atom  12:Atom  13:Atom  14:CLASS  15:CLASS  16:Atom  17:Atom  19:Atom  20:Atom
21:Atom  22:Atom




L8             0 SEA SUB=L5 SSS SAM L7
L9             3 SEA SUB=L5 SSS FUL L7
                 D SCAN

     FILE 'STNGUIDE' ENTERED AT 15:19:39 ON 24 JUN 2009

     FILE 'REGISTRY' ENTERED AT 15:22:44 ON 24 JUN 2009
L10              STRUCTURE UPLOADED
                 D

Uploading L3.str
```



```
chain nodes :
21  24
ring nodes :
1  2  3  4  5  6  7  8  9  10  11  12  13  14  15
```

```
ring/chain nodes :
19  20
chain bonds :
2-24  20-21
ring/chain bonds :
2-19  19-20
ring bonds :
1-2  1-9  1-5  2-3  3-10  3-4  4-13  4-5  5-6  6-7  7-8  8-9  10-11  11-12  12-13

exact/norm bonds :
1-2  1-9  1-5  2-3  2-19  2-24  3-10  3-4  4-13  4-5  5-6  6-7  7-8  8-9  10-11
11-12  12-13  19-20
exact bonds :
20-21
isolated ring systems :
containing 1 :


Match level :
1:Atom  2:Atom  3:Atom  4:Atom  5:Atom  6:Atom  7:Atom  8:Atom  9:Atom  10:Atom
11:Atom  12:Atom  13:Atom  14:CLASS  15:CLASS  16:Atom  17:Atom  19:CLASS  20:CLASS
21:Atom  24:CLASS




L11           0 SEA SUB=L5 SSS SAM L10
L12           0 SEA SUB=L5 SSS FUL L10

     FILE 'STNGUIDE' ENTERED AT 15:24:17 ON 24 JUN 2009

     FILE 'REGISTRY' ENTERED AT 15:28:12 ON 24 JUN 2009
L13             STRUCTURE UPLOADED
                D

Uploading L4.str
```




```
chain nodes :
17  20
ring nodes :
1  2  3  4  5  6  7  8  9  10  11  12  13
ring/chain nodes :
15  16  21  22  23  24  25  26
chain bonds :
2-20  8-21  11-24  16-17
ring/chain bonds :
2-15  15-16  21-22  21-23  24-25  24-26
ring bonds :
1-2  1-9  1-5  2-3  3-10  3-4  4-13  4-5  5-6  6-7  7-8  8-9  10-11  11-12  12-13
```

```
exact/norm bonds :
2-15  2-20  8-21  11-24  15-16  21-22  21-23  24-25  24-26
exact bonds :
1-2  2-3  4-5  16-17
normalized bonds :
1-9  1-5  3-10  3-4  4-13  5-6  6-7  7-8  8-9  10-11  11-12  12-13
isolated ring systems :
containing 1 :


Match level :
1:Atom  2:Atom  3:Atom  4:Atom  5:Atom  6:Atom  7:Atom  8:Atom  9:Atom  10:Atom
11:Atom  12:Atom  13:Atom  15:CLASS  16:CLASS  17:Atom  20:CLASS  21:CLASS
22:CLASS  23:CLASS  24:CLASS
25:CLASS  26:CLASS



L14           0 SEA SUB=L5 SSS SAM L13
L15           1 SEA SUB=L5 SSS FUL L13
                D SCAN
                SAVE TEMP L15 FAN333REGL4/A

     FILE 'HCAPLUS' ENTERED AT 15:30:39 ON 24 JUN 2009
L16           1 SEA ABB=ON  PLU=ON  L15
                D SCAN TI HIT
                D QUE L16
                D L16 IBIB ABS HITSTR HITIND
```